

Notice of Allowability**Application No.**

10/716,174

Applicant(s)

NGUYEN ET AL.

Examiner

MELANIE YU

Art Unit

1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 18 September 2008.
2. ☒ The allowed claim(s) is/are 26-28, 33-46 and 306-312 (renumbered claims 1-24).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 12/10/08.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Bao-Thuy L. Nguyen/
Primary Examiner, Art Unit 1641

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ms. Monica Elrod-Erickson on 9 December 2008.

The application has been amended as follows:

Claim 26, insert a new line after line 12 as follows: --c) one or more second caging groups associated with a phosphobinder;--.

Line 24: replace "a phosphobinder" with --the phosphobinder--.

Lines 25: delete "wherein the".

Line 26: delete "phosphobinder is associated with one or more second caging groups," and replace "the presence of" with --wherein the presence of the second caging groups--.

Claim 28, insert a new line after line 12 as follows: --a phosphobinder comprising an antibody, an SH-2 domain, a PTB domain, a 14-3-3 domain, an FHA domain, a WD40 domain and/or a WW domain;".

Line 24: replace "a phosphobinder" with --the phosphobinder--.

Line 25: replace "; wherein the" with --.--.

Delete lines 26 and 27.

Claim 33, insert a new line after line 12 as follows: --c) one or more second caging groups associated with a phosphobinder, wherein the presence of the phosphobinder prevents the phosphobinder from binding on the phosphorylated substrate;--.

Line 17: replace "a phosphobinder" with --the phosphobinder--.

Line 25: replace "a phosphobinder" with --the phosphobinder--.

Line 30: replace ";" with --,--.

Delete lines 31 and 32.

Claim 35, insert a new line after line 12 as follows: --c) a phosphobinder comprising: an antibody, an SH-2 domain, a PTB domain, a 14-3-3 domain, an FHA domain, a WD40 domain and/or a WW domain;--.

Line 17: replace "a phosphobinder" with --the phosphobinder--.

Line 25: replace "a phosphobinder" with --the phosphobinder--.

Line 30: replace ";" with --,--.

Delete lines 31 and 32.

Claim 309, insert a new line after line 12 as follows: --c) one or more second caging groups associated with a phosphobinder, wherein the presence of the phosphobinder prevents the phosphobinder from binding the phosphorylated substrate;".

Line 25: replace "a phosphobinder" with --a phosphobinder--.

Line 26: replace " ; wherein the" with --,--.

Delete lines 27 and 28.

Claim 310, insert a new line after line 13: "a phosphobinder comprising: an antibody, an SH-2 domain, a PTB domain, a 14-3-3 domain, an FHA domain, a WD40 domain and/or a WW domain;--.

Line 25: replace "a phosphobinder" with --the phosphobinder--.

Line 26: replace "; wherein the" with --.--.

Delete lines 27 and 28.

Claim 311, insert a new line after line 13: --c) one or more second caging groups associated with a phosphobinder, wherein the presence of the phosphobinder prevents the phosphobinder from binding on the phosphorylated substrate;--.

Line 18: replace "a phosphobinder" with --the phosphobinder--.

Line 26: replace "a phosphobinder" with --the phosphobinder--.

Line 31: replace ";" with --.--.

Delete lines 32 and 33.

REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance: the prior art fails to teach a polypeptide substrate for a kinase that comprises a first or second label and one or more first caging groups associated with the polypeptide to inhibit the enzyme from acting on the substrate.
3. Fay et al. teach a polypeptide comprising a substrate for kinase, but fail to teach the polypeptide comprising the first or second label.

4. Burbaum et al. (US 5,981,207) teach a polypeptide comprising a caged enzyme substrate as a probe for detecting an enzyme of alkaline phosphatase. However, Burbaum et al. fail to teach the polypeptide comprising a first or second label and instead the alkaline phosphatase provides a luminescent signal.
5. Craig et al. (US 6,670,144) teach two polypeptides comprising a substrate for kinase wherein one polypeptide comprises a first label and a second polypeptide comprises a second label. Craig et al. fail to teach a single polypeptide comprising a substrate for kinase, a first label and a second label.
6. Walker et al. (PNAS, 1998) teach a caged peptide synthesized outside of a cell and then injected into a cell, but fail to teach a caging group or label associated with the peptide for detecting activity of an enzyme.
7. Ting et al. (PNAS, 2001) teach a cell comprising an enzyme and a substrate for the enzyme, wherein the substrate has a first label and a second label, wherein the first label interacts with the second label upon phosphorylation. Ting et al. fail to teach phosphorylation of the substrate preventing interaction between the first and second labels and also fail to teach the substrate having a caging group to that prevents kinase acting on the substrate.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELANIE YU whose telephone number is (571)272-2933. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Shibuya can be reached on (571) 272-0806. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Melanie Yu/
Patent Examiner, Art Unit 1641

/Bao-Thuy L. Nguyen/
Primary Examiner, Art Unit 1641
December 17, 2008